

## **Influence of Age, Reproductive Status and Vulvar Conformation on Canine Vaginal Microflora**

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### **Abstract**

The influence of age, reproductive status and vulvar conformation on canine vaginal microflora of dogs reared in a tropical environment was successfully determined. Vaginal swab samples were obtained from 15 intact and 15 spayed bitches from a shelter. The dogs were grouped according to age and vaginal cytological examination was conducted to determine the oestrous cycle stage of the bitch. Physical examination and images of the vulvar conformation were captured and classed into three categories (I, II and III) based on the position, size and percentage of occlusion. The effect of vulvar conformation on bacterial load was determined. Canine vaginal microflora isolated in this study is similar to that reported in temperate climates. Coagulase-positive *Staphylococcus* was the most common bacteria isolated from 86.7% of the bitches. All isolated bacteria were normal opportunistic microflora of the vagina. Bitches less than one-year old had a higher bacteria load, which was 50% higher than bitches above one-year old. This finding may be attributed to the differences in immunity maturity and physiological responses of the dogs. Spayed bitches have higher bacterial load compared to intact bitches in anestrus and this may be associated with the partially occluded vulvae which occurred in 87% of these bitches. Category III, which included bitches with >50% vulvar occlusion by skin folds had a higher load of bacteria (60%) compared to category I where the vulva was not occluded (33.3%).

**Keywords:** Vaginal microflora, intact bitches, spayed bitches, bacterial load, vulvar conformation